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(54) **Method for testing low permeability formations**

(57) An improved formation testing method for measuring initial sandface pressure and formation permeability in tight zone formations exhibiting formation permeabilities on the order of 1.0-0.001 millidarcies is based on pressure transients which occur shortly after a tester enters its pressure build-up cycle and substantially before reaching final build-up pressure. The method makes an estimate of formation permeability based on fluid decompression transients which occur in the for-

mation tester flowlines, shortly after the tester begins its build-up cycle. The method further estimates initial sandface pressure based on the change in pressure over time shortly after beginning the build-up phase. Accurate estimates of formation permeability and initial sandface pressure are thus made relatively early in the build-up cycle, thus substantially reducing the time required to make the pressure and permeability measurements.

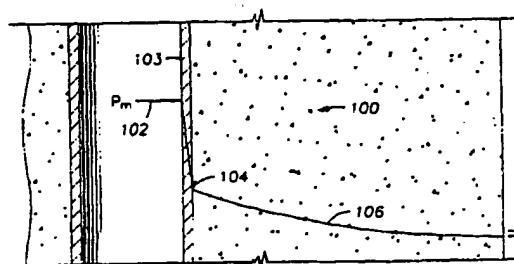


FIG. 1A

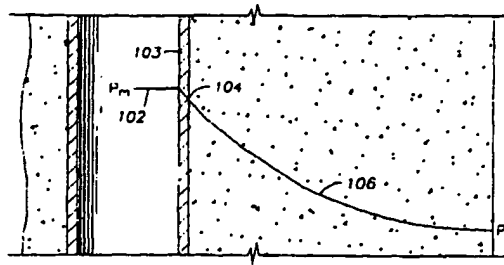


FIG. 1B



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EUROPEAN SEARCH REPORT

Application Number
EP 95 30 4226

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
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E	EP 0 697 502 A (SCHLUMBERGER LTD; SCHLUMBERGER SERVICES PETROL (FR); SCHLUMBERGER) * abstract * * page 3, paragraph 1 * * claims 1,8 * * figure 1 *	1	

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The present search report has been drawn up for all claims			
Place of search BERLIN		Date of completion of the search 2 April 1997	Examiner Schaeffler, C
CATEGORY OF CITED DOCUMENTS X: particularly relevant if taken alone Y: particularly relevant if combined with another document of the same category A: technological background O: non-written disclosure P: intermediate document		T: theory or principle underlying the invention E: earlier patent document, but published on, or after the filing date D: document cited in the application I: document cited for other reasons &: member of the same patent family, corresponding document	

EPF FORM 1503 01/92 (P/M/C/D)



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DOCUMENTS CONSIDERED TO BE RELEVANT			
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A	--- EP 0 126 680 A (SCHLUMBERGER LTD; SCHLUMBERGER PROSPECTION (FR)) * abstract * * column 4, line 52 - column 5, line 11 * * claim 1 * * figure 1 *	1	
The present search report has been drawn up for all claims			
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<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			

EP 95 FORM 1503 (01.91) (P&C/COI)



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Application Number
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The present search report has been drawn up for all claims			
Place of search BERLIN		Date of completion of the search 2 April 1997	Examiner Schaeffler, C
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